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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,834	02/15/2000	Francois Patenaude	Borden-P11US0	5465

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EXAMINER

PRETLOW, DEMETRIUS R

ART UNIT PAPER NUMBER

2863

DATE MAILED: 09/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.	Applicant(s)	
09/503,834	PATENAUME, FRANCOIS	
Examiner	Art Unit	
Demetrius R. Pretlow	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 15 February 2000.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-39 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-8, 12, 14, 23-30 and 34 is/are rejected.

7) Claim(s) 9-11, 13, 15-2231-33 and 35-39 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Higgins et al. Higgins et al. teach representing the signal as a series of discrete frequency and amplitude values by using a Fast-Fourier-Transform. Note column 6, lines 4-42. Higgins et al. teach a histogram based on the discrete frequency and amplitude values. Note column 7, lines 1-30. Higgins et al. teach deriving a noise floor estimate from characteristics of the histogram. Note column 7, lines 31-43.

In reference to claim 23, Higgins et al. teach the digitizer module (23); a histogram module (75); and an estimation module (80, 90). Note column 4, lines 64-67, column 5, line 1; column 7, lines 23-28; and column 7, lines 1-16.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2,4-8,14,24,26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins et al. in view of Kleider et al. and Fry. Higgins et al. teach sampling a signal by an analog-to-digital converter (23); windowing the output signals; and applying a mathematical transform to the results of the windowing. Note Higgins et al. column 5, lines 40-46 and column 6, lines 4-42. Higgins et al. does not teach converting an amplitude to a log domain representation and rounding the log-domain representation to the nearest integer value. Kleider et al. teach converting the amplitude into a log-domain representation. Note Kleider et al. column 4, lines 51-61 and Figures 4-7. Rounding the log-domain representation to the nearest integer value is inherent to the system of Kleider et al. Note Kleider et al. Figures 3-7. Higgins et al. does not teach a plurality of analog-to-digital converters. Fry teach the use of a plurality of analog-to-digital converters. Note Fry Figure 1 and column 4, lines 63-

67 and column 5, lines 1-5. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Higgins et al., Kleider et al., and Fry because it would allow the classification of communication signals. Note Kleider et al. column 2, lines 46-48.

In reference to claims 4 and 26, Higgins et al. teach a Fast Fourier Transform.

Note Higgins et al. column 6, lines 15-19.

In reference to claims 5 and 27, Higgins et al. does not teach multiplying 20 by the base10 logarithm. Kleider et al. teach converting the amplitude into a log-domain representation and converting the amplitude values to a log-domain value which would suggest that multiplying 20 by the base10 logarithm would be inherent to the invention of Kleider et al. Note Kleider et al. column 4, lines 51-61 and Figures 4-7. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Higgins et al. and Kleider et al because multiplying 20 by the base 10 logarithm would allow the classification of communication signals as decibels.

Note Kleider et al. column 2, lines 46-48.

In reference to claims 6 and 28, Higgins et al. does not teach decibel values. Kleider et al. teach decibel values. Note Kleider et al. Figures 3-7. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Higgins et al. and Kleider et al because decibel values would allow the classification of communication signals. Note Kleider et al. column 2, lines 46-48.

In reference to claims 7 and 29, Higgins et al., Kleider et al. and Fry do not teach decibel milliwatt. The Examiner takes Official Notice that the unit milliwatt is well known in the art. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to add the unit of milliwatt to the combined systems of Higgins et al., Kleider et al. and Fry because it is a common unit used in the measurement of power.

In reference to claim 8,14, 30, and 36, Higgins et al., Kleider et al., and Fry do not teach a histogram establishing bins representing decibel integers. The Examiner takes Official Notice that establishing a lowest bin and highest bins and bins between representing decibel values and incrementing values are well known in the art. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to add establishing a lowest bin, highest bins and bins between representing decibel values and incrementing values to the combined inventions of Higgins et al., Kleider et al., and Fry because bins would provide a range in which the analyzed signals fall.

Claim 24 contain limitations similar to those in claim 2, which was discussed above.

***Allowable Subject Matter***

5. Claims 9-13,15-22, and 31-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed June 20, 2002 have been fully considered but they are not persuasive. The applicant argues that the combined cited art offers no suggestion for application of log-domain representation and plurality of analog-to-digital converters. This is not found convincing because the claim language given its broadest reasonable interpretation reads on the prior art taught by Higgins et al. Kleider et al. and Fry. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (703) 308-6722. The examiner can normally be reached on Monday - Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hiltén, can be reached at (703) 308-0719. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Demetrius R. Pretlow

Patent Examiner

*Demetrius Pretlow* 9/6/02

*[Handwritten signature]*  
JOHN S. HILTEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800